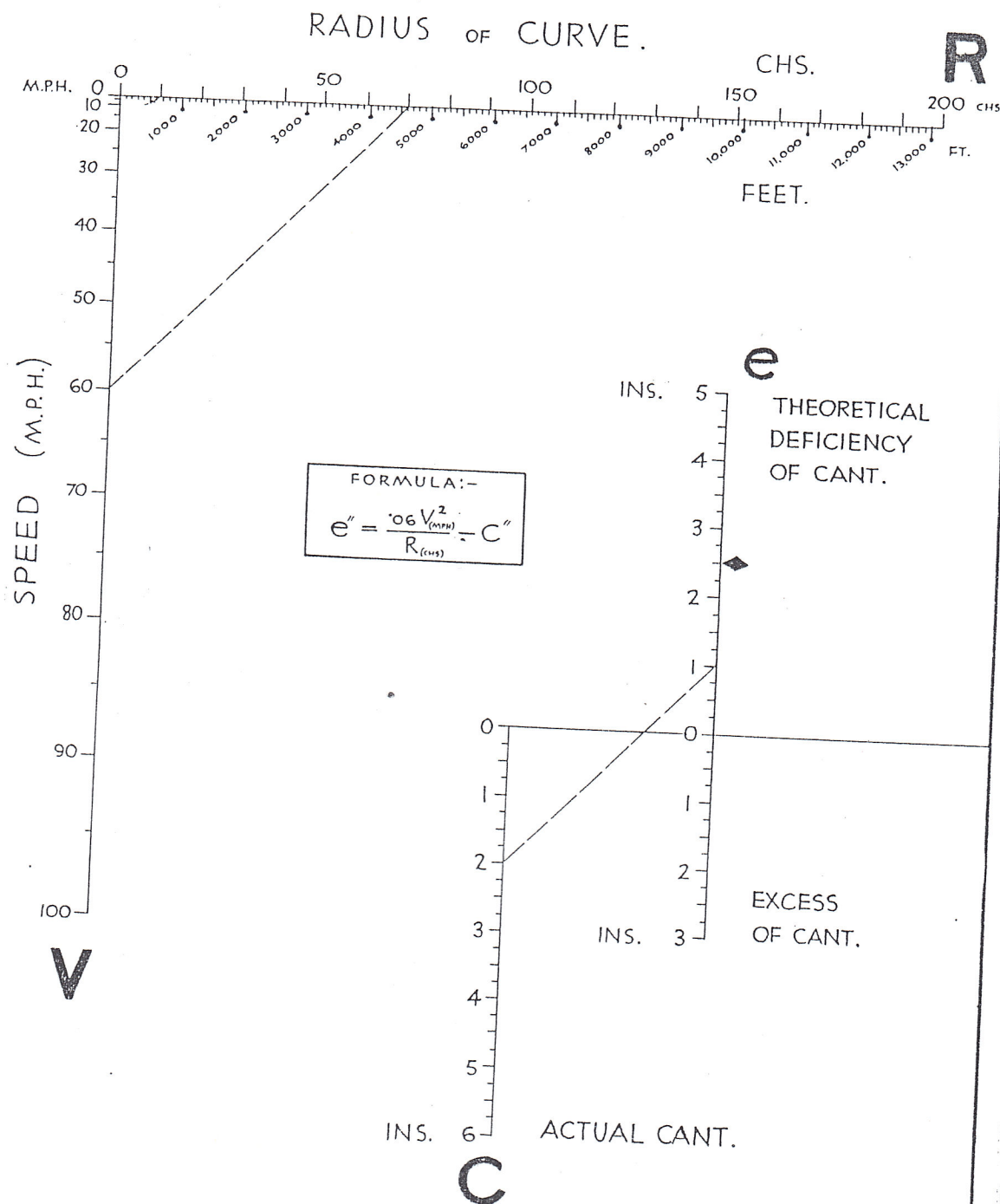PERMANENT WAY
NOTES | DEFICIENCY OF CANT

THESE NOTES ARE INTENDED FOR THE GUIDANCE AND ASSISTANCE OF STAFF ENGAGED UPON PERMANENT WAY WORK. THEY DO NOT IN ANY WAY MODIFY OR AMEND THE INSTRUCTIONS LAID DOWN IN E.D.I., STANDARD DRAWINGS, CIRCULARS ETC., WHICH SHOULD BE REFERRED TO IN ALL CASES.

RADIUS OF CURVE.

CHS.

R

FEET.

SPEED (M.P.H.)

V

FORMULA:—

$$e'' = \frac{\cdot 06\, V^2_{(MPH)}}{R_{(CHS)}} - C''$$

e

THEORETICAL DEFICIENCY OF CANT.

EXCESS OF CANT.

INS. ACTUAL CANT.

C

EXAMPLE:

SPEED, V = 60 M.P.H.
RADIUS, R = 70 CHS.
CANT, C = 2 INS.

DRAW A LINE FROM THE POINT 60 ON THE SCALE OF V TO THE POINT 70 ON THE SCALE OF R. DRAW A PARALLEL LINE THROUGH THE POINT 2 ON THE SCALE OF C: THE POINT WHERE THE LATTER CUTS THE SCALE OF e GIVES THE THEORETICAL DEFICIENCY OF CANT (1").

CONVERSELY BY DRAWING ANOTHER PARALLEL, THROUGH THE POINT O ON THE SCALE OF e, THE THEORETICAL CANT FOR SPEED 70 M.P.H. IS FOUND ON SCALE C. ALSO BY JOINING THE POINT 2 ON SCALE C TO THE POINT 2½ ON SCALE e AND DRAWING A PARALLEL THROUGH THE POINT 70 ON SCALE R TO CUT SCALE V, THE SPEED CORRESPONDING TO 2½" THEORETICAL DEFICIENCY OF CANT IS OBTAINED (73 MPH IN THIS CASE). [SEE CIRC. Nº10/174 2½-2-38]

R.1759 | CHIEF ENGINEER'S OFFICE. — PADDINGTON. | MAR. 1938